

PROJECT NOTE

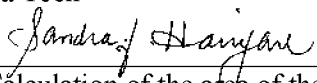
Date: September 30, 2009

Project Number: TTEMI-05-003-0001

Name: Sandra Harrigan

Title: Environmental Scientist

Firm: Tetra Tech

Signature: 

Subject: Calculation of the area of the Exterior Waste Pile at the Smokey Mountain Smelters facility located in Knoxville, Knox County, Tennessee

PROJECT NOTE SUMMARY

Below is a bulleted list of the steps used by Tetra Tech geographic information system (GIS) personnel to calculate the area of the exterior waste pile (Source No. 1) at the Smokey Mountain Smelters facility.

- To determine the area of the exterior waste pile (Source No. 1) at the Smokey Mountain Smelters facility located in Knoxville, Knox County, Tennessee, aerial photograph images depicting the facility location were uploaded into ArcView v9.3, a GIS software made by ESRI
- The aerial photographs reviewed ranged in date from 2000 to 2008.
- By viewing areas that appeared to have some type of scarring in these aerial images, the extent of the pile was digitized in GIS (using ESRI ArcView).
- Once digitized, the area of the pile was calculated using an application within GIS, Xtools Pro, using the Calculate Area Function.
- The extent of the exterior pile was then compared to soil borings advanced and sampled by Lockheed Martin under the Resource Engineering and Analytical Contract (REAC) to ensure that the approximate locations of the soil borings were located within the area determined to be the exterior waste pile.

Using the process described above, the estimated area of the exterior waste pile, Source No. 1, is about 152,672 square feet or 3.5 acres. The figure depicting the exterior waste pile as determined by GIS personnel is attached.

In addition, the EPA On-Scene Coordinator (OSC), Mr. Matt Huyser, determined the extent of the waste pile using aerial photographs as well as his knowledge of the Smokey Mountain Smelters facility. Attached is an aerial photograph depicting the approximate boundary of the exterior waste pile as provided by OSC Huyser. Based on this information, the estimated area of the exterior waste pile is about 3.3 acres or 143,748 square feet.

The area of the exterior waste pile as determined by Tetra Tech GIS personnel and OSC Huyser are within 6 percent of each other.

RESPONSE REQUIRED

(x) None () Phone Call () Memo () Letter () Report

cc: File (x) Project Manager () Principal Investigator () Other (specify)

